

WHAT IS CLAIMED IS:

1. A method for identifying a diseased cell or tissue, said disease being associated with abnormal CAP43 expression,
which method comprises detecting, in a cell or tissue, an elevated level of a CAP43 gene product.
2. A method according to claim 1 wherein the CAP43 gene product is encoded by:
 - (a) a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
 - (b) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
 - (c) a nucleic acid at least 70% identical, at the nucleotide level, to the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1).
3. A method according to claim 1 wherein the CAP43 gene product is a polypeptide comprising:
 - (a) the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2); or
 - (b) an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).
4. A method according to claim 1 wherein the CAP43 gene product is detected by an antibody that specifically binds to a CAP43 polypeptide.
5. A method according to claim 4 wherein the antibody is detectably labeled.
6. A method according to claim 4, which method comprises steps of:
 - (a) applying the antibody to a cell or tissue; and

(b) detecting binding of the antibody to a CAP43 polypeptide.

7. A method according to claim 6 wherein the antibody is applied *in situ* to the cell or tissue.

8. A method according to claim 6 wherein the antibody is applied *in vivo* to the cell or tissue.

9. A method according to claim 1 wherein the diseased cell or tissue is a cancer cell or tissue.

10. A method according to claim 9 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma, or a malignant fibrous histiocytoma.

11. A method according to claim 1 wherein the diseased cell or tissue is granuloma cell or tissue.

12. A method according to claim 1 wherein the diseased cell or tissue is atherosclerotic cell or tissue.

13. A method for identifying a disease cell or tissue, said diseased being associated with abnormal CAP43 expression,
which method comprises detecting, in a cell or tissue, an elevated level of a CAP43 nucleic acid.

14. A method according to claim 13 wherein the CAP43 nucleic acid is:

(a) a nucleic acid having a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);

- (b) a nucleic acid that hybridizes to the complement of a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2); or
- (c) a nucleic acid that encodes an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).

15. A method according to claim 14 wherein the CAP43 nucleic acid is:

- (a) a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (b) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
- (c) a nucleic acid having a nucleotide sequence at least 70% identical to the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1).

16. A method according to claim 13 wherein the CAP43 nucleic acid is detected by a second nucleic acid that specifically hybridizes to the CAP43 nucleic acid.

17. A method according to claim 16 wherein the second nucleic acid is detectably labeled.

18. A method according to claim 16, which method comprises steps of:

- (a) contacting nucleic acid from a cell or tissue with the second nucleic acid under conditions suitable for hybridization of the second nucleic acid to CAP43 nucleic acid; and
- (b) detecting hybridization of the second nucleic acid to a CAP43 nucleic acid.

19. A method according to claim 18 wherein the second nucleic acid is contacted *in situ* to nucleic acid from the cell or tissue.

20. A method according to claim 18 wherein the second nucleic acid is contacted *in vivo* to nucleic acid from the cell or tissue.
21. A method according to claim 13 wherein the diseased cell or tissue is a cancer cell or tissue.
22. A method according to claim 21 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma, or a malignant fibrous histiocytoma.
23. A method according to claim 13 wherein the diseased cell or tissue is granuloma cell or tissue.
24. A method according to claim 13 wherein the diseased cell or tissue is atherosclerotic cell or tissue.
25. A method for diagnosing, in an individual, a disease associated with abnormal CAP43 expression,
which method comprises detecting, in a sample from the individual, an elevated level of a CAP43 gene product.
26. A method according to claim 25 wherein the CAP43 gene product is encoded by:
 - (a) a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
 - (b) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
 - (c) a nucleic acid having a nucleotide sequence at least 70% identical to the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1).

27. A method according to claim 25 wherein the CAP43 gene product is a polypeptide comprising:
 - (a) the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2); or
 - (b) an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).
28. A method according to claim 25 wherein the gene product is detected by an antibody that specifically binds to a CAP43 polypeptide.
29. A method according to claim 28 wherein the antibody is detectably labeled.
30. A method according to claim 28, which method comprises steps of:
 - (a) applying the antibody to the sample; and
 - (b) detecting binding of the antibody to a CAP43 polypeptide.
31. A method according to claim 25 wherein the sample is a body fluid sample.
32. A method according to claim 31 wherein the body fluid sample is a blood sample.
33. A method according to claim 25 wherein the sample is a cell or tissue sample.
34. A method according to claim 25 wherein the disease is cancer.
35. A method according to claim 34 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, melanoma, a lymphoma or a malignant fibrous histiocytoma.
36. A method according to claim 25 wherein the disease is atherosclerosis.

37. A method according to claim 25 wherein the disease is granuloma.
38. A method for diagnosing, in an individual, a disease associated with abnormal CAP43 expression,
which method comprises detecting, in a sample from the individual, an elevated level of a CAP43 nucleic acid.
39. A method according to claim 38 wherein the CAP43 nucleic acid is:
 - (a) a nucleic acid having a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
 - (b) a nucleic acid that hybridizes to the complement of a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2); or
 - (c) a nucleic acid having a nucleotide sequence that encodes an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).
40. A method according to claim 39 wherein the CAP43 nucleic acid is:
 - (a) a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
 - (b) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
 - (c) a nucleic acid having a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1).
41. A method according to claim 38 wherein the CAP43 nucleic acid is detected by a second nucleic acid that specifically hybridizes to the CAP43 nucleic acid.

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42. A method according to claim 41 wherein the second nucleic acid is detectably labeled.
43. A method according to claim 41, which method comprises steps of:
 - (a) contacting nucleic acid from the sample with the second nucleic acid under conditions suitable for hybridization of the second nucleic acid to CAP43 nucleic acid; and
 - (b) detecting hybridization of the second nucleic acid to CAP43 nucleic acid.
44. A method according to claim 38 wherein the sample is a body fluid sample.
45. A method according to claim 44 wherein the body fluid sample is a blood sample.
46. A method according to claim 38 wherein the sample is a cell or tissue sample.
47. A method according to claim 38 wherein the disease is cancer.
48. A method according to claim 47 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, melanoma, a lymphoma or a malignant fibrous histiocytoma.
49. A method according to claim 38 wherein the disease is atherosclerosis.
50. A method according to claim 38 wherein the disease is granuloma.
51. A method for identifying a cancer cell or tissue, which method comprises detecting, in a cell or tissue, an elevated level of a CAP43 gene product, wherein the CAP43 gene product has an amino acid sequence:

- (a) encoded by a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (b) encoded by a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (c) encoded by a nucleic acid having a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (d) comprising the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
or
- (e) comprising an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).

52. A method according to claim 51 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma, or a malignant fibrous histiocytoma.

53. A method for identifying a cancer cell or tissue, which method comprises detecting, in a cell or tissue, an elevated level of a CAP43 nucleic acid, wherein the CAP43 nucleic acid is:

- (a) a nucleic acid having a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (b) a nucleic acid that hybridizes to the complement of a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (c) a nucleic acid having a nucleotide sequence that encodes an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (d) a nucleic acid comprising the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);

- (e) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
- (f) a nucleic acid comprising a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1).

54. A method according to claim 53 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma, or a malignant fibrous histiocytoma.

55. A method for diagnosing a cancer in an individual, which method comprises detecting, in a sample from the individual, an elevated level of a CAP43 gene product, wherein the CAP43 gene product has an amino acid sequence:

- (a) encoded by a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (b) encoded by a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (c) encoded by a nucleic acid having a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (d) comprising the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2); or
- (e) comprising an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).

56. A method according to claim 55 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma, or a malignant fibrous histiocytoma.

57. A method for diagnosing a cancer in an individual, which method comprises detecting, in a sample from the individual, an elevated level of a CAP43 nucleic acid, wherein the CAP43 nucleic acid is:

- (a) a nucleic acid having a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (b) a nucleic acid that hybridizes to the complement of a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (c) a nucleic acid having a nucleotide sequence that encodes an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (d) a nucleic acid comprising the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (e) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
- (f) a nucleic acid comprising a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1).

58. A method according to claim 58, wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma, or a malignant fibrous histiocytoma.

59. A method for administering a compound to a diseased cell, said disease being associated with abnormal CAP43 expression, which method comprises contacting the cell with the compound complexed to a protein that specifically binds to a CAP43 polypeptide.

60. A method according to claim 59 wherein the CAP43 polypeptide has an amino acid sequence:

- (a) encoded by a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (b) encoded by a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (c) encoded by a nucleic acid having a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (d) comprising the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
or
- (e) comprising an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).

61. A method according to claim 59 wherein the polypeptide that specifically binds to a CAP43 polypeptide is an antibody.

62. A method according to claim 59 wherein the compound is a toxin.

63. A method according to claim 62 wherein the toxin is a thymidine kinase, an endonuclease, an RNase, an α -toxin, ricin, abrin, an exotoxin A, a diphtheria toxin, saporin, momordin, gelonin, a pokeweed antiviral protein, α -sarcin, or a cholera toxin.

64. A method according to claim 59 wherein the compound is a cytotoxin.

65. A method according to claim 64 wherein the cytotoxin is a benzoic acid mustard alkylating agent derivative, a etoposide derivative, a mitomycin C derivative, or a doxorubicin derivative.

66. A method according to claim 65 wherein the cytotoxin is a glutamyl derivative of a benzoic acid mustard alkylating agent.

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67. A method according to claim 65 wherein the cytotoxin is a phosphate derivative or etoposide.

68. A method according to claim 65 wherein the cytotoxin is a phosphate derivative of mitomycin C.

69. A method according to claim 65 wherein the cytotoxin is a phenoxyacetamide derivative of doxorubicin.

70. A method according to claim 59 wherein the diseased cell is a cancer cell.

71. A method according to claim 70 wherein the cancer is a lung cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma or a malignant fibrous histiocytoma.

72. A method according to claim 59 wherein the diseased cell is an atherosclerotic cell.

73. A method according to claim 59 wherein the cell is a granuloma cell.

74. A complex comprising:

- (a) an antibody that specifically binds to a CAP43 polypeptide; and
- (b) a therapeutic compound.

75. A complex according to claim 74 wherein the CAP43 polypeptide has an amino acid sequence:

- (a) encoded by a nucleic acid having the nucleotide sequence set forth in **FIG. 1A (SEQ ID NO:1)**;

- (b) encoded by a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (c) encoded by a nucleic acid having a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (d) comprising the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
or
- (e) comprising an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).

76. A complex according to claim 74 wherein the therapeutic compound is a drug, a pro-drug, a toxin or a cytotoxin.

77. A complex according to claim 76 wherein the therapeutic compound is a toxin selected from the group consisting of a thymidine kinase, an endonuclease, an RNase, an α -toxin, ricin, abrin, an exotoxin A, a diphtheria toxin, saporin, momordin, gelonin, a pokeweed antiviral protein, α -sarcin, and a cholera toxin.

78. A complex according to claim 76 wherein the therapeutic compound is a cytotoxin selected from the group consisting of a benzoic acid mustard alkylating agent derivative, a etoposide derivative, a mitomycin C derivative, and a doxorubicin derivative.

79. A complex according to claim 74 wherein the therapeutic compound is covalently attached to the antibody.

80. A complex according to claim 74 wherein the antibody comprises:
- (a) a first Fab' arm that specifically binds to a CAP43 polypeptide; and
 - (b) a second Fab' arm that specifically binds to the therapeutic compound.

81. A complex according to claim 74 which further comprises a polypeptide having:

- (i) a first binding domain that binds to the antibody; and
- (ii) a second binding domain that binds to the therapeutic compound.

82. A pharmaceutical composition comprising:

- (a) an antibody that specifically binds to a CAP43 polypeptide and has a therapeutic compound attached thereto; and
- (b) a pharmaceutically acceptable carrier.

83. A pharmaceutical composition according to claim 82 in which the CAP43 polypeptide has an amino acid sequence:

- (a) encoded by a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (b) encoded by a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (c) encoded by a nucleic acid having a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (d) comprising the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
or
- (e) comprising an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).

84. A kit for identifying a diseased cell or tissue, said disease being associated with abnormal CAP43 expression, which kit comprises:

- (a) at least one of (i) a nucleic acid that specifically hybridizes to a CAP43 nucleic acid, or (ii) an antibody that specifically binds to a CAP 43 polypeptide; and
- (b) instructions for using said kit.

85. A kit according to claim 84, wherein the CAP43 nucleic acid comprises:

- (a) a nucleotide sequence that encodes that amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (b) a nucleic acid that hybridizes to the complement of a nucleotide sequence that encodes the polypeptide set forth in **FIG. 1B** (SEQ ID NO:2);
- (c) a nucleotide sequence that encodes an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (d) the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (e) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
- (f) a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1).

86. A kit according to claim 84 wherein the CAP43 polypeptide has an amino acid sequence:

- (a) encoded by a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (b) encoded by a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
- (c) comprising the amino acid sequence set forth in SEQ ID NO:2.

87. A kit according to claim 84 wherein the disease cell or tissue is a cancer cell or tissue.

88. A kit according to claim 87 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma or a malignant fibrous histiocytoma.

89. A method for treating a disorder associated with abnormal CAP43 expression or activity, which method comprises contacting a cell with a compound that inhibits expression or activity of a CAP43 nucleic acid so that one or more symptoms of the disorder are ameliorated.

90. A method according to claim 89 wherein the CAP43 nucleic acid comprises:
- (a) a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
 - (b) a nucleic acid that hybridizes to the complement of a nucleotide sequence that encodes the polypeptide set forth in **FIG. 1B** (SEQ ID NO:2);
 - (c) a nucleotide sequence that encodes an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2);
 - (d) the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
 - (e) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
 - (f) a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1).

91. A method according to claim 89 wherein the disorder is a cancer.

92. A method according to claim 91 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma cancer, a lymphoma or a malignant fibrous histiocytoma.

93. A method for treating a disorder associated with abnormal CAP43 expression or activity, which method comprises contacting a cell with a compound that inhibits expression or activity of a CAP43 polypeptide.

94. A method according to claim 93 wherein the CAP43 polypeptide has an amino acid sequence:

- (a) encoded by a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (b) encoded by a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (c) encoded by a nucleic acid having a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (d) comprising the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2); or
- (e) comprising an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).

95. A method according to claim 93 wherein the disorder is a cancer.

96. A method according to claim 95 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma or a malignant fibrous histoma.

97. A pharmaceutical composition for treating cancer,
which pharmaceutical composition comprises a compound that inhibits expression
or activity of a CAP43 nucleic acid, and
wherein the compound is present in said pharmaceutical composition in an
amount sufficient to ameliorate one or more symptoms of the cancer.

98. A pharmaceutical composition according to claim 97 wherein the CAP43 nucleic acid comprises:

- (a) a nucleotide sequence that encodes the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (b) a nucleic acid that hybridizes to the complement of a nucleotide sequence that encodes the polypeptide set forth in **FIG. 1B** (SEQ ID NO:2);

- (c) a nucleotide sequence that encodes an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2);
- (d) the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (e) a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1); or
- (f) a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1).

99. A pharmaceutical composition according to claim 97 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma cancer, a lymphoma or a malignant fibrous histocytoma.

100. A pharmaceutical composition for treating cancer, which pharmaceutical composition comprises a compound that inhibits expression or activity of a CAP43 polypeptide, and wherein the compound is present in said pharmaceutical composition in an amount sufficient to ameliorate one or more symptoms of the cancer.

101. A pharmaceutical composition according to claim 100 wherein the CAP43 polypeptide has an amino acid sequence:

- (a) encoded by a nucleic acid having the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (b) encoded by a nucleic acid that hybridizes to the complement of the nucleotide sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (c) encoded by a nucleic acid having a nucleotide sequence at least 70% identical to the sequence set forth in **FIG. 1A** (SEQ ID NO:1);
- (d) comprising the amino acid sequence set forth in **FIG. 1B** (SEQ ID NO:2); or
- (e) comprising an amino acid sequence at least 70% identical to the sequence set forth in **FIG. 1B** (SEQ ID NO:2).

102. A pharmaceutical composition according to claim 100 wherein the cancer is a lung cancer, a colon cancer, a kidney cancer, a breast cancer, a prostate cancer, a melanoma, a lymphoma or a malignant fibrous histoma.